

Compatible Pair of Nontrivial Actions for Some Cyclic Groups of 2-Power Order

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ABSTRACT

Compatible actions play a very important verification before the nonabelian tensor product can be computed. This paper gives the some exact number of compatible pairs of actions for some cyclic groups of 2-power order. Some necessary and sufficient numbers of theoretical conditions for a pair of cyclic groups of 2-power order with nontrivial actions which act compatibly on each other are used to investigate some properties in order to find the exact number of compatible pairs of actions. Algorithms in Groups, Algorithms and Programming (GAP) software are used to create more examples on selected cases. New results on compatible pair of nontrivial actions of order two and four for cyclic groups of 2-power order are presented in this paper.

Keywords

Actions, Cyclic Groups, Nonabelian Tensor Product Actions, Cycl